

I CLAIM:

1. A device for analyzing a fingerprint, comprising: 1) a fingerprint analysis mechanism including a fingerprint sensor configured to detect a fingerprint from a finger; and 2) a switch operable to activate the fingerprint analysis mechanism, the switch being disposed adjacent the fingerprint sensor so that a single stroke of the finger can operate the switch and present the finger to the sensor using separate regions of the finger.

2. The device of claim 1, the sensor being configured to detect spatial differences in at least one of an electrical property, an optical property, and a thermal property across a surface of the finger.

3. The device of claim 1, wherein the fingerprint analysis mechanism includes a processor configured to create a digital representation of the detected fingerprint.

4. The device of claim 3, wherein the fingerprint analysis mechanism includes memory for storing digital representations of fingerprints, the processor also being configured to compare the digital representation of the fingerprint that is read with at least one stored digital representation.

5. The device of claim 1, the switch including a button configured to be operated mechanically by contact with one of the separate regions of the finger.

6. The device of claim 4, wherein the fingerprint sensor has a window at or through which the fingerprint is received from the finger, the button and the window being spaced when viewed from a direction generally normal to the window.

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7. The device of claim 1, wherein the fingerprint sensor and the switch each define a contact surface, the switch being disposed to contact the finger before, simultaneous with, or after the contact surface of the fingerprint sensor when the finger approaches from a direction generally normal to the contact surfaces.

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8. The device of claim 7, wherein the contact surface of the switch is elevated relative to the contact surface of the fingerprint sensor.

9. The device of claim 1, the switch being operable by mechanical pressure exerted through the finger.

10. The device of claim 1, wherein the fingerprint analysis mechanism includes distinct modes for saving power and for analyzing the fingerprint, activation of the analysis mechanism converting the fingerprint sensor from the power-saving mode to the fingerprint-analysis mode.

11. The device of claim 10, wherein the fingerprint sensor is configured to revert to the power-saving mode after a preset time period or when the switch is released, the power-saving mode drawing less power than the fingerprint-analysis mode.

5 12. The device of claim 1, wherein the switch is disposed for contact with a joint region of the finger, the fingerprint sensor having a window for receiving the fingerprint from a fingertip region disposed distal to the joint region.

10 13. The device of claim 1, the switch being flanked by guides configured for side-to-side positioning of the finger.

14. The device of claim 1, the switch being flanked by guides configured to contact a joint region of the finger.

15 15. The device of claim 1, wherein the fingerprint analysis mechanism is configured to receive the finger in at least one predefined orientation that places the finger over the switch and the sensor.

16. A fingerprint-operated system, comprising: 1) an apparatus configured to perform an operation that is user-selective; and 2) a fingerprint analysis mechanism connected to the apparatus and configured to perform a comparison of a detected fingerprint with at least one stored fingerprint to permit or deny the operation based on the comparison, the mechanism including a) a fingerprint analysis mechanism including a fingerprint sensor configured to detect a fingerprint from a finger, and b) a switch operable to actuate the fingerprint analysis mechanism, the switch being disposed adjacent the fingerprint sensor so that a single stroke of the finger can operate the switch and present the finger to the sensor using separate regions of the finger.

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17. The system of claim 16, the apparatus being an enclosure having a lock mechanism, the operation being opening the lock mechanism, thereby permitting access to the enclosure.

15 18. The system of claim 17, the enclosure being formed at least substantially of at least one of wood, metal, plastic, a composite, an elastomer, and a ceramic.

19. The system of claim 16, the apparatus being selected from a telephone, a computer, a mailbox, a television, a gun, a vending machine, and an automated teller.

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20. A fingerprint reader, comprising:

a sensor configured to sense a fingerprint;

a processor configured to process fingerprint data from the fingerprint sensed by the sensor and to select a signal from at least two signal choices based on processing the

5 fingerprint data; and

at least one light source in communication with the processor and configured to emit light having a color indicating the signal selected by the processor.